

In the Claims:

1. (Currently Amended) The valve controller of claim 24 wherein said valve controller is operative~~An apparatus~~ for opening and closing a valve having a first and a second opening and a first and a second position corresponding to either a fully open or fully closed position, said valve controller establishing a maximum pressure which, when applied to said cap base, will cause said valve controller plunger to move from said first to said second position; and, ~~said apparatus comprising:~~

wherein said valve controller is operatively connected to said valve such that said valve controller causes said valve to remain at said ~~is normally disposed at said first position~~ when said pressure at said first opening is less than said maximum pressure and wherein said valve controller causes said valve to move to ~~is disposed at~~ said second position when said pressure at said first opening exceeds said maximum pressure.

2. (Canceled)

3. (Currently Amended) The apparatus as claimed in claim 24 wherein said guide region includes a channel.

4. (Currently Amended) The apparatus as claimed in claim 2—24 wherein said biasing mechanism includes a spring.

5. (Original) The apparatus as claimed in claim 4 wherein said valve controller further includes a device for adjusting the biasing force of said spring.

6. (Currently Amended) The apparatus as claimed in claim 2—24 wherein said indentation includes a circumferential slot.

7. (Currently Amended) The apparatus as claimed in claim 2—24 wherein said guide region is disposed within said plunger such that a first end of said guide region is proximate an outer surface of said plunger and a second end of said guide region is disposed proximate said second end region of said plunger.

8. (Currently Amended) The apparatus as claimed in claim 2—24 wherein said guide region includes a first and at least a second channel oppositely disposed about said plunger, said first and said second channel sized and shaped to accept a portion of a

first and at least a second ball.

9. (Currently Amended) The apparatus as claimed in claim 2—24 wherein said valve opens proportionally to a pressure difference between a first maximum pressure and a pressure at said outlet such that said valve opens further as said pressure difference increases and wherein said valve controller fully opens said valve at all times when said outlet pressure is below a second maximum pressure and automatically fully closes said valve when said outlet pressure reaches said second maximum pressure.

10. (Currently Amended) The apparatus as claimed in claim 2—24 wherein first opening includes an inlet, said second opening includes an outlet, said first position includes said fully closed position, and said second position includes said fully open position.

11. (Currently Amended) The apparatus as claimed in claim 2—24 wherein first opening includes an inlet, said second opening includes an outlet, said first position includes said fully open position, and said second position includes said fully closed

position.

12. (Currently Amended) ~~A pressure regulator comprising:~~

The valve controller of claim 24 wherein said valve controller is operatively coupled to a pressure regulator valve which is proportionately opened in relation to a pressure difference between a first maximum pressure setting of said valve and an outlet pressure of said valve, such that said valve opens proportionate to said pressure difference; and

a quick fill device operatively connected to said valve, said valve controller quick fill device for overriding said pressure regulator valve for causing such that said valve to be is fully open at all times when said outlet pressure of said valve is below a maximum pressure setting of said valve controller which is set below said maximum pressure setting of said valve, and for automatically fully closing closes said valve when said outlet pressure reaches said second maximum pressure setting of said valve controller.

13. (Currently Amended) The valve controller of claim 12 wherein said valve controller further includes ~~The pressure regulator as~~

~~claimed in claim 12 wherein said quick fill device comprises:~~

~~— a body defining a first cavity having a base region and an opening region;~~

~~— a plunger disposed within said first cavity of said body, said plunger operatively connected to said pressure regulator;~~

~~— a biasing mechanism disposed within said first cavity between said base region of said body and said plunger; and~~

an actuator disposed in said cavity and coupled to said plunger, wherein said actuator forces said plunger into a first position fully opening said valve when an outlet pressure of said valve is below asaid maximum pressure setting of said valve controller, and wherein said outlet pressure of said valve forces said plunger into a second position automatically and fully closing said valve~~pressure regulator~~ when said outlet pressure reaches said maximum pressure setting of said valve controller.

14. (Original) The pressure regulator as claimed in claim 13 wherein said cavity including a circumferential slot disposed proximate said opening region, said circumferential slot sized to accept a portion of a ball.

15. (Original) The pressure regulator as claimed in claim 14 wherein said plunger includes a notch region and a guide region, wherein said guide region is disposed within said plunger such that a first end of said guide region is proximate an outer surface of said plunger and a second end of said guide region is disposed proximate said second end region of said plunger.

16. (Original) The pressure regulator as claimed in claim 15 further including a biasing mechanism disposed within said first cavity between said base region of said body and said first end region of said plunger.

17. (Original) The pressure regulator as claimed in claim 16 wherein said actuator further includes a cap disposed within said first cavity, said cap defining a second cavity having a base and at least one leg, said at least one leg sized and shaped to fit within said notch region of plunger such that said at least one leg contacts said ball.

18. (Currently Amended) The valve controller of claim 24 wherein said valve includes a pressure relief valve including an inlet and

an outlet; and

wherein said valve controller is operatively connected to said valve such for causing that said valve to remainis fully closed at all times when a pressure at said valve inlet is lower than a predetermined maximum pressure setting of said valve controller and for causing said valve to move to ais fully open position at all times when said inlet pressure exceeds said maximum ~~predetermined-pressure~~ setting of said valve controller.

19. (Currently Amended) The valve controller of claim 18 wherein said valve controller further includes ~~The relief valve as claimed in claim 18 wherein said valve controller comprises:~~

~~— a body defining a first cavity having a base region and an opening region;~~

~~— a plunger disposed within said first cavity of said body, said plunger operatively connected to said relief valve;~~

~~a biasing mechanism disposed within said first cavity between said base region of said body and said plunger; and~~

an actuator disposed in said cavity and coupled to said plunger, wherein said actuator forces said plunger into a first position fully closing said valve when said inlet pressure of said

valve is below said a—maximum pressure setting of said valve controller and wherein said inlet pressure of said valve forces said plunger into a second position automatically and fully opening said valvepressure—regulator when said inlet pressure reaches said maximum pressure setting of said valve regulator.

20. (Original) The relief valve as claimed in claim 19 wherein said cavity including a circumferential slot disposed proximate said opening region, said circumferential slot sized to accept a portion of a ball.

21. (Original) The relief valve as claimed in claim 20 wherein said plunger includes a notch region and a guide region, wherein said guide region is disposed within said plunger such that a first end of said guide region is proximate an outer surface of said plunger and a second end of said guide region is disposed proximate said second end region of said plunger.

22. (Original) The relief valve as claimed in claim 21 further including a biasing mechanism disposed within said first cavity between said base region of said body and said first end region of



said plunger.

23. (Original) The relief valve as claimed in claim 22 wherein said actuator further includes a cap disposed within said first cavity, said cap defining a second cavity having a base and at least one leg, said at least one leg sized and shaped to fit within said notch region of plunger such that said at least one leg contacts said ball.

24. (NEW) A valve controller comprising:

a valve controller, coupled to a valve, said valve controller including

a body defining a cavity and having a base region and an opening region, said cavity including an indentation disposed proximate said opening region, said indentation sized to accept a portion of a ball;

a plunger disposed in said cavity and having a first and a second oppositely disposed end region, said second end region including a notch region 46 and a guide region 48, said plunger moveable in said cavity between a first position wherein said ball is disposed in said indentation of said body and contacts said

guide region of said plunger, and a second position wherein said ball is dislodged from said indentation in said body and is located proximate said notch region of said plunger;

a biasing mechanism adapted to be disposed within said first cavity between said base region of said body and said first end region of said plunger.; and

a cap disposed within said first cavity, said cap having a base and at least one leg extending therefrom, said at least one leg sized and shaped to fit within said notch region of plunger such that said at least one leg contacts said ball.